

THE UNITED STATES PATENT AND TRADEMARK OFFICE

In re application of:

LEE *et al.*

Appl. No.: 10/535,624

Int'l. Filing Date: November 22, 2002

For: **Antimicrobial Peptide Isolated  
from *Halocynthia Aurantium***

Confirmation No.: 1731

Art Unit: *To Be Assigned*

Examiner: *To Be Assigned*

Atty. Docket: 2393.0010000/JUK/WBC

**Information Disclosure Statement Under 37 C.F.R. § 1.97(b)**

*Mail Stop PCT*

Commissioner for Patents  
PO Box 1450  
Alexandria, VA 22313-1450

Sir:

Listed on accompanying IDS Forms are documents that may be considered material to the examination of this application, in compliance with the duty of disclosure requirements of 37 C.F.R. §§ 1.56, 1.97 and 1.98. Copies of documents FP1 and NPL1-NPL24 are submitted.

Where the publication date of a listed document does not provide a month of publication, the year of publication of the listed document is sufficiently earlier than the effective U.S. filing date and any foreign priority date so that the month of publication is not in issue. Applicants have listed publication dates on the attached IDS Forms based on information presently available to the undersigned. However, the listed publication dates should not be construed as an admission that the information was actually published on the date indicated.

Applicants reserve the right to establish the patentability of the claimed invention over any of the information provided herewith, and/or to prove that this information may

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This statement should not be construed as a representation that a search has been made, or that information more material to the examination of the present patent application does not exist. The Examiner is specifically requested not to rely solely on the material submitted herewith.

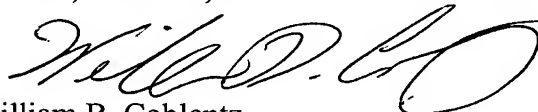
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It is respectfully requested that the Examiner initial and return a copy of the enclosed IDS Forms, and indicate in the official file wrapper of this patent application that the documents have been considered.

The U.S. Patent and Trademark Office is hereby authorized to charge any fee deficiency, or credit any overpayment, to our Deposit Account No. 19-0036.

Respectfully submitted,

STERNE, KESSLER, GOLDSTEIN & FOX P.L.L.C.



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Date:

1/30/06

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## FOREIGN PATENT DOCUMENTS

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<b>INFORMATION DISCLOSURE STATEMENT BY APPLICANT</b> <i>(Use as many sheets as necessary)</i>				Application Number	10/535,624
				Int'l. Filing Date	November 22, 2002
				First Named Inventor	In-Hee LEE
				Art Unit	To Be Assigned
				Examiner Name	To Be Assigned
Sheet	1	of	3	Attorney Docket Number	2393.0010000/JUK/WBC

NON PATENT LITERATURE DOCUMENTS			
Examiner Initials*	Cite No. <sup>1</sup>	Include name of the author (in CAPITAL LETTERS), title of the article (when appropriate), title of the item (book, magazine, journal, serial, symposium, catalog, etc.), date, page(s), volume issue number(s), publisher, city and/or country where published	T <sup>2</sup>
	NPL1	Azumi, K., <i>et al.</i> , "Halocyanines: Novel Antimicrobial Tetrapeptide-like Substances Isolated from the Hemocytes of the Solitary Ascidian <i>Halocynthia roretzi</i> ," <i>Biochem. 29</i> :159-165, American Chemical Society (1990)	
	NPL2	Azumi, K., <i>et al.</i> , "Inhibitory Effect of Halocyanine, an Antimicrobial Substance from Ascidian Hemocytes, on the Growth of Fish Viruses and Marine Bacteria," <i>Experientia. 46</i> :1066-1068, Birkhäuser Verlag (1990)	
	NPL3	Bellm, L., <i>et al.</i> , "Protegrins: New Antibiotics of Mammalian Origin," <i>Expert Opin. Investig. Drugs. 9</i> :1731-1742, Ashley Publications Ltd. (2000)	
	NPL4	Falla, T., <i>et al.</i> , "Mode of Action of the Antimicrobial Peptide Indolicidin," <i>J. Biol. Chem. 271</i> :19298-19303, The American Society for Biochemistry and Molecular Biology, Inc. (1996)	
	NPL5	Fehlbaum, P., <i>et al.</i> , "Structure-Activity Analysis of Thanatin, a 21-Residue Inducible Insect Defense Peptide with Sequence Homology to Frog Skin Antimicrobial Peptides," <i>Proc. Natl. Acad. Sci. USA. 93</i> :1221-1225, National Academy of Sciences (1996)	
	NPL6	Goraya, J., <i>et al.</i> , "Peptides with Antimicrobial Activity from Four Different Families Isolated from the Skins of the North American Frogs <i>Rana Luteiventris</i> , <i>Rana Berlandieri</i> and <i>Rana Pipiens</i> ," <i>Eur. J. Biochem. 267</i> :894-900, Federation of European Biochemical Societies (2000)	
	NPL7	Hancock, R.E., <i>et al.</i> , "Cationic Bactericidal Peptides," <i>Adv. Microbial Physiol. 37</i> :135-175, Academic Press Inc. (1995)	
	NPL8	Hancock, R.E., <i>et al.</i> , "The Role of Antimicrobial Peptides in Animal Defenses," <i>Proc. Natl. Acad. Sci. USA. 97</i> :8856-8861, National Academy of Sciences (2000)	
	NPL9	Hetru, C., <i>et al.</i> , "Androctonin, A Hydrophilic Disulphide-Bridged Non-Haemolytic Anti-Microbial Peptide: A Plausible Mode of Action," <i>Biochem. J. 345</i> :653-664, Portland Press Ltd. (2000)	
	NPL10	Iwanaga, S., <i>et al.</i> , "New Types of Clotting Factors and Defense Molecules Found in Horseshoe Crab Hemolymph: Their Structures and Functions," <i>J. Biochem. 123</i> :1-15, The Japanese Biochemical Society (1998)	
Examiner Signature			Date Considered

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	NPL11	Jang, W. S., <i>et al.</i> , "Halocidin: A New Antimicrobial Peptide from Hemocytes of the Solitary Tunicate, <i>Halocynthia Aurantium</i> ," <i>FEBS Lett.</i> 521:81-86, Elsevier Science B.V. (May 2002)	
	NPL12	Krause, A., <i>et al.</i> , "LEAP-1, A Novel Highly Disulfide-Bonded Human Peptide, Exhibits Antimicrobial Activity," <i>FEBS Lett.</i> 480:147-150, Elsevier Science B.V. (2000)	
	NPL13	Lee, I. H., <i>et al.</i> , "Styelins, Broad-Spectrum Antimicrobial Peptides from the Solitary Tunicate, <i>Styela clava</i> ," <i>Comp. Biochem. Physiol. B Biochem. Mol. Biol.</i> 118B:515-521, Elsevier Science Inc. (1997)	
	NPL14	Lee, I. H., <i>et al.</i> , "Clavanins, $\alpha$ -helical Antimicrobial Peptides from Tunicate Hemocytes," <i>FEBS Lett.</i> 400:158-162, Elsevier Science B.V. (1997)	
	NPL15	Lee, I. H., <i>et al.</i> , "Effects of pH and Salinity on the Antimicrobial Properties of Clavanins," <i>Infection and Immunity.</i> 65:2898-2903, American Society for Microbiology (1997)	
	NPL16	Lee, I. H., <i>et al.</i> , "Dicynthaurin: An Antimicrobial Peptide from Hemocytes of the Solitary Tunicate, <i>Halocynthia aurantium</i> ," <i>Biochim. Biophys. Acta.</i> 1527:141-148, Elsevier Science B.V. (May 2001)	
	NPL17	Lehrer, R. I., <i>et al.</i> , "DEFENSINS: Antimicrobial and Cytotoxic Peptides of Mammalian Cells," <i>Annu. Rev. Immunol.</i> 11:105-128, Annual Reviews Inc. (1993)	
	NPL18	O'Neil, D. A., <i>et al.</i> , "Expression and Regulation of the Human $\beta$ -Defensins hBD-1 and hBD-2 in Intestinal Epithelium," <i>J. Immunol.</i> 163:6718-6724, The American Association of Immunologists (1999)	
	NPL19	Piers, K. L., <i>et al.</i> , "Improvement of Outer Membrane-Permeabilizing and Lipopolysaccharide-Binding Activities of an Antimicrobial Cationic Peptide by C-Terminal Modification," <i>Antimicrob. Agents Chemother.</i> 38:2311-2316, The American Society for Microbiology (1994)	
	NPL20	Romeo, D., <i>et al.</i> , "Structure and Bactericidal Activity of an Antibiotic Dodecapeptide Purified from Bovine Neutrophils," <i>J. Biol. Chem.</i> 263:9573-9575, The American Society for Biochemistry and Molecular Biology (1988)	

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	NPL21	Taylor, S. W., <i>et al.</i> , "Styelin D, an Extensively Modified Antimicrobial Peptide from Ascidian Hemocytes," <i>J. Biol. Chem.</i> 275:38417-38426, The American Society for Biochemistry and Molecular Biology (2000)	
	NPL22	Zhang, L., <i>et al.</i> , "Interaction of Cationic Antimicrobial Peptides with Model Membranes," <i>J. Biol. Chem.</i> 276:35714-35722, The American Society for Biochemistry and Molecular Biology, Inc. (July 2001)	
	NPL23	Zhao, C., <i>et al.</i> , "cDNA Cloning of Clavanins: Antimicrobial Peptides of Tunicate Hemocytes," <i>FEBS Lett.</i> 410:490-492, Elsevier Science B.V. (1997)	
	NPL24	Zhao, C., <i>et al.</i> , "cDNA Cloning of Three Cecropin-Like Antimicrobial Peptides (Styelins) from the Tunicate, <i>Styela clava</i> ," <i>FEBS Lett.</i> 412:144-148, Elsevier Science B.V. (1997)	

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